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Please find below and/or attached an Office communication concerning this application or proceeding.

The time period for reply, if any, is set in the attached communication.

Office Action Summary

Application No.

10/826,461

Applicant(s)

RICHARDS ET AL.

Examiner

SRINIVASA R. REDDIVALAM

Art Unit

2477

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 12/07/2010.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-19, 22-25, 27-30, 38 and 39 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-19, 22-25, 27-30 and 38-39 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-848)
- 3) ☐ Information Disclosure Statement(s) (PTO/SB08)
Paper No(s)/Mail Date _____
- 4) ☐ Interview Summary (PTO-413)
Paper No(s)/Mail Date _____
- 5) ☐ Notice of Informal Patent Application
- 6) ☐ Other: _____

DETAILED ACTION

1. A request for continued examination under 37 CFR 1.114, including the fee set forth in 37 CFR 1.17(e), was filed in this application after final rejection. Since this application is eligible for continued examination under 37 CFR 1.114, and the fee set forth in 37 CFR 1.17(e) has been timely paid, the finality of the previous Office action has been withdrawn pursuant to 37 CFR 1.114. Applicant's submission filed on 12/07/2010 has been entered.

Claim Objections

2. Claim 38 is objected to because of the following informalities: In claim 38, line 6, the words ' the second cell' need to be replaced with the words 'the first cell' as the term 'the first cell' only has proper antecedent basis in the claim and ';' needs to be inserted at the end of line 6. Appropriate correction is required.

Claim Rejections - 35 USC § 103

3. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

4. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation

under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

5. Claims 1, 2, 14, 18, 23, 38 and 39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Telefonaktiebolaget LM Ericsson (Pub. No: WO-2004/016012 A1) in view of Kim et al. (US Pub. No: 2004/0202140 A1).

Regarding claim 1, Telefonaktiebolaget LM Ericsson teaches a method for determining whether to initiate a point to multipoint multicast service from a first base station of a first cell (see Abstract and para [0049]), the method comprising: receiving a user message transmitted by user equipment positioned in a second cell, wherein the user message includes a list of at least one neighbouring cell (see Fig.1 and page 18, para [0051] wherein a mobile station 70 in second cell reporting its active set i.e. the set of RBSs from which it receives signals above a given signal strength, to the network is mentioned); and

in response to the user message, providing a point to multipoint multicast service in the first cell, when the first cell is listed in the list of the at least one neighboring cell (see page 19, paragraphs [0053] & [0054] wherein, in response to receiving the message from the mobile station 70 of second cell, the network activating the broadcast/multicast service in the cells identified in the requesting mobile station's reported active set that includes the first cell, is mentioned), and a point to multipoint multicast service is in use in the second cell (see page 19, para [0052] wherein the registration flag bits in the

neighbor set of a given service area getting aged separately (i.e. timed separately) is mentioned and see para [0053] wherein the mobile station's reported active set might include fewer neighboring cells based on the corresponding registration flag bits being set and may not include second cell as it's flag bit may not be set and a point to multipoint multicast service is in use in second cell and can continue to be use in the second cell until the mobile station detects its flag bit being set).

Telefonaktiebolaget LM Ericsson does not teach specifically the method comprising transmitting a message from a second base station in a second cell, wherein the first cell is a neighbour of the second cell, the message indicating, to user equipment positioned in the second cell, a list of cells that are neighbours to the second cell and are presently transmitting a multicast service;

However, Kim et al. teach a method comprising transmitting a message from a second base station in a second cell, wherein the first cell is a neighbour of the second cell, the message indicating, to user equipment positioned in the second cell, a list of cells that are neighbours to the second cell and are presently transmitting a multicast service (see Fig.6 and page 4, para [0052] wherein UE positioned in serving/second cell, collecting neighbor cells information, that includes first cell, from the serving/second cell is mentioned and UE also receiving information to determine MBMS condition of neighbor cells is mentioned).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson to include transmitting a message from a second base station in a second cell, wherein the first cell is a neighbour of the second cell, the message indicating, to user equipment positioned in the second cell, a list of cells that are neighbours to the second cell that are presently transmitting a multicast service, disclosed by Kim et al. in order to provide an efficient service by supporting mobility of a UE receiving an MBMS service of a mobile communication system.

Regarding claim 2, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim 1.

Telefonaktiebolaget LM Ericsson further teaches the method further comprising: transmitting, in the second cell from the second base station, a network message to request the user equipment positioned in the second cell to provide neighbouring cell information; wherein the user message is in response to the network message (see para [0051] wherein the network providing threshold information to the mobile station 70 for use in determining its active set & reporting it to the network is mentioned).

Regarding claim 14, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim 1.

Kim et al. further teach the method further comprising: transmitting from the second base station in the second cell, an initial message to indicate to the user equipment a list of cells that are neighbours to the second cell (see Fig.6 and page 4, para [0052]).

Regarding claim 18, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the

method of claim 1.

Kim et al. further teaches the method further comprising allowing the user equipment to join the point to multipoint multicast service provided by the first cell (see page 4, paragraphs [0063] & [0064]).

Regarding claim 23, Telefonaktiebolaget LM Ericsson teach a method to assist in determining whether to initiate a point to multipoint multicast service within a mobile radio network, wherein user equipment is positioned in a first cell of a group of neighbouring cells (see Abstract, Fig.1 and page 18, para [0049]), the method comprising: determining, for each neighbouring cell in the group of neighbouring cells, whether the user equipment can detect the neighbouring cell (see page 18, para [0051] wherein a mobile station determining & reporting its active set i.e. the set of RBSs from which it receives signals above a given signal strength, to the network is mentioned); generating a user message indicating which of the neighbouring cells the user equipment can detect; transmitting the user message (see paragraphs [0051] & [0052] wherein the mobile station reporting/transmitting active set/neighbor list information to the network is mentioned); and receiving a network message generated responsive to the user message, wherein the network message indicates a new transmission of a point to multipoint multicast service by a second base station in a second cell of the group of neighbouring cells; wherein the second cell is indicated in the user message (see page 19, paragraphs [0053] & [0054] wherein, in response to receiving the message from the mobile station 70, the network activating the broadcast/multicast service in the cells identified in the requesting mobile station's reported active set that

includes second base station in a second cell, is mentioned and also see para [0049] wherein the network transmitting the broadcast/multicast session to the desired mobile stations in the *dynamic service zones* that include second base station in a second cell of the mobile station's reported active set/group of neighbouring cells, is mentioned).

Telefonaktiebolaget LM Ericsson does not teach specifically the method comprising transmitting a message from a base station in the first cell, the message indicating, to the user equipment, a list of cells that are neighbours to the first cell and are presently transmitting a multicast service;

However, Kim et al. teach a method comprising transmitting a message from a base station in the first cell, the message indicating, to the user equipment, a list of cells that are neighbours to the first cell and are presently transmitting a multicast service (see Fig.6 and page 4, para [0052] wherein UE positioned in serving/first cell, collecting neighbor cells information of the serving/first cell from the serving/first cell is mentioned and UE also receiving information from the serving/first cell to determine MBMS condition of neighbor cells is mentioned).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson to include transmitting a message from a base station in the first cell, the message indicating, to the user equipment, a list of cells that are neighbours to the first cell that are presently

transmitting a multicast service, disclosed by Kim et al. in order to provide an efficient service by supporting mobility of a UE receiving an MBMS service of a mobile communication system.

Regarding claim 38, Telefonaktiebolaget LM Ericsson teaches a method to initiate a point to multipoint multicast service in a group of cells, the method (see Abstract) comprising:

transmitting a network message to initiate a response from a user equipment in the first cell (see para [0034] wherein a network sending a message with registration request flag to mobile station is mentioned); receiving a user message transmitted by the user equipment positioned in the first cell (see paragraphs [0052-53] wherein mobile station sending message back with registration request is mentioned); and in response to the user message, initiating the point to multipoint multicast service in *only* the group of cells neighbouring the first cell (see para [0054] wherein *network initiating the multicast service in default service zone 14 controlled by that service area 10* is mentioned and see Fig.1 and para [0052] wherein the neighbour list used in the context of the invention comprising *the list of neighbouring service areas corresponding to a default zone* for that service area is mentioned and *this is clearly equivalent to initiating the point to multipoint multicast service in only the group of cells neighbouring the first cell*).

Telefonaktiebolaget LM Ericsson does not teach specifically the method comprising transmitting a message to the user equipment in the first cell, the message indicating a

list of cells that are neighbours to the first cell and are presently transmitting a multicast service.

However, Kim et al. teach a method comprising transmitting a message to the user equipment in the first cell, the message indicating a list of cells that are neighbours to the first cell and are presently transmitting a multicast service (see Fig.6 and page 4, para [0052] wherein UE positioned in serving/first cell, collecting neighbor cells information of the serving/first cell from the serving/first cell is mentioned and UE also receiving information from the serving/first cell to determine MBMS condition of neighbor cells is mentioned).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson to include transmitting a message to the user equipment in the first cell, the message indicating a list of cells that are neighbours to the first cell that are presently transmitting a multicast service, disclosed by Kim et al. in order to provide an efficient service by supporting mobility of a UE receiving an MBMS service of a mobile communication system.

Regarding claim 39, Telefonaktiebolaget LM Ericsson further teaches the method wherein the list of the at least one neighbouring cell comprises a list of neighbouring cells capable of providing a point to multipoint multicast service if that service were to be requested by a UE (see page 18, para [0049]).

6. Claims 3-6, 8-13, 15-17, 24-25 and 27-30 are rejected under 35 U.S.C. 103(a) as being unpatentable over Telefonaktiebolaget LM Ericsson (Pub. No: WO-2004/016012 A1) in view of Kim et al. (US Pub. No: 2004/0202140 A1) and further in view of 3GPP TS 25.346 V6.0.0 (2004-03) ("3GPP").

Regarding claims 3-6 and 8, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim 1 above.

Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach specifically the method, wherein the list of the at least one neighbouring cell is a list of neighbouring cells the user equipment could use for combining if a multicast service is provided in the listed neighbouring cell, wherein the list of the at least one neighbouring cell indicates base stations that the user equipment could use for combining if the multicast service is transmitted by the indicated base station, wherein the user equipment measures a point to multipoint signal of the neighbouring cells presently transmitting the multicast service, and wherein the list of the at least one neighbouring cell indicates base stations having transmissions that the user equipment is able to both demodulate and detect.

However, "3GPP" teaches the method, wherein the list of the at least one neighbouring cell is a list of neighbouring cells the user equipment could use for combining if a multicast service is provided in the listed neighbouring cell, wherein the list of the at least one neighbouring cell indicates base stations that the user equipment could use for combining if the multicast service is transmitted by the indicated base station, wherein the user equipment measures a point to multipoint signal of the neighbouring

cells presently transmitting the multicast service, and wherein the list of the at least one neighbouring cell indicates base stations having transmissions that the user equipment is able to both demodulate and detect (see page 21, section 7.1 and also see pages 23-24, sections 7.3.1 – 7.3.5 of “3GPP” teach that user equipment performs selective combining if UE has valid MBMS neighbouring cell information of that cell for MBMS reception).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include the list of the at least one neighbouring cell as a list of neighbouring cells the user equipment could use for combining if a multicast service is provided in the listed neighbouring cell, to have the list of the at least one neighbouring cell indicating base stations that the user equipment could use for combining if the multicast service is transmitted by the indicated base station, to have the user equipment measuring a point to multipoint signal of the neighbouring cells presently transmitting the multicast service, and to have the list of the at least one neighbouring cell indicating base stations having transmissions that the user equipment being able to both demodulate and detect, disclosed by “3GPP” in order to have better reception of multicast service by the user equipment in mobile communication system.

Regarding claims 9-13, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim 1 above.

Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach specifically for the method, wherein the user message further includes a signal measurement which is indicative of one or more signal quality, an error rate, a received signal power, a beacon signal power, a pilot signal power, signal power of existing multicast transmission or signal to noise ratio, for each cell in the list of the at least one neighbouring cell.

However "3GPP" teaches for the method of claim 1, wherein the user message further includes a signal measurement for each cell (Page21, section 7.1, 7th para. i.e. based on threshold e.g. measured CPICH EC/N0 from neighbouring cell) in the list of at least one neighbouring cell and the signal measurement (i.e. the threshold) can be an error rate (i.e. block error rate, CRC), a received signal power, a beacon signal power, a pilot signal power or EC/No that UE could use in selective combining.

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to have the user message further includes a signal measurement that is indicative of one or more of a signal quality for each cell in the list of neighbouring cells, disclosed by "3GPP" in order to facilitate UE to determine neighbouring cell suitable for selective combining.

Regarding claims 15 & 16, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim1 above.

Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach specifically the method, further comprising transmitting from the second base station in the second cell, an initial message to wake the UE positioned in the second cell from an idle mode, wherein the initial message is a page notification message including a set of indicators corresponding to a respective set of multicast services and wherein each of the indicators indicates whether the second base station is transmitting an updated multicast control channel message.

However, "3GPP" teaches that the method comprising the act of transmitting from the second base station in the second cell, an initial message to wake the user equipment positioned in the second cell from an idle mode (Page 26, Section 8.1.1, 1st para, lines 2-3 i.e. UTRAN may first apply conventional paging to move UEs in URA_PCH to Cell_PCH state), wherein the initial message is a page notification message including a set of indicators corresponding to a respective set of multicast services, and wherein each of the indicators indicates whether the second base station is transmitting an updated multicast control channel message (Page 13, Section 5.2.4, 3rd para).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include transmitting an initial message, which is a page notification message including a set of indicators corresponding to a respective set of multicast services, from a 2nd base station in a 2nd cell to wake the user equipment positioned in the second cell from an

idle mode, disclosed by "3GPP" to apply counting to determine the most optimal mode for multicast service.

Regarding claim 17, Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach the method wherein, the network message includes a cause value that indicates an enhanced counting procedure is invoked for the multicast service.

However, "3GPP" teaches a method, wherein the network message includes a cause value that indicates an enhanced counting procedure is invoked for the multicast service (Page 14, Section 5.2.5, 1st para).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include the cause value in the network message disclosed by "3GPP" to indicate an enhanced counting procedure being invoked for the multicast service.

Regarding claims 24-25 and 27-30, Telefonaktiebolaget LM Ericsson and Kim et al. together teach the method of claim 23 above.

Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach specifically the method further comprising: receiving a first signal from the first base station, the first base station transmitting the point to multipoint multicast service, receiving a second signal from the second base station transmitting the point to multipoint multicast service and combining the first and second signals and wherein the base station transmission that the UE can detect, is combined if the point to multipoint multicast

service is enabled on the base station and the method further includes determining a signal measurement for each of the neighbouring cells and that are detected, wherein the user message further includes the signal measurement for each of the neighbouring cells and that are detected, and wherein the signal measurement is indicative of received both beacon signal power and pilot signal power.

However, "3GPP" teaches for the method, wherein the user message further includes a signal measurement for each cell in the list of one or more neighbouring cells and the signal measurement (i.e. the threshold) can be a received, signal power, a beacon signal power, and a pilot signal power UE could use in selective combining of two signals that are transmitted from 2 base stations that UE can detect having the multicast transmissions (Page21, section 7.1, 7th para. i.e. based on threshold e.g. measured CPICH EC/N0 from neighbouring cell, UE determines neighbouring cell suitable for selective combining).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include that UE could use two signals from two base stations having multicast transmissions that UE can detect, for combining and wherein the user message further includes a signal measurement that is indicative of received beacon signal power or pilot signal power for each cell in the list of neighbouring cells, disclosed by "3GPP" in order to facilitate UE to determine neighbouring cell suitable for selective combining.

7. Claims 19 and 22 are rejected under 35 U.S.C. 103(a) as being unpatentable over Telefonaktiebolaget LM Ericsson (Pub. No: WO-2004/016012 A1) in view of Kim et al. (US Pub.No: 2004/0202140 A1) and further in view of Jung et al, (Pub. No: 2005/0213541).

Regarding claim 19, Telefonaktiebolaget LM Ericsson teaches a method for determining whether to initiate a point to multipoint multicast service in a group of cells in a network (see Abstract and para [0049]), the method comprising: receiving at least one user message transmitted by a respective at least one user equipment positioned in at least one selected cell of the group of cells, wherein the at least one user message includes a list of at least one neighbouring cell and a request for multicast service (see Fig.1 and page 18, para [0051] wherein a mobile station 70 positioned in the group of cells in the network, reporting its active set i.e. the set of RBSs from which it receives signals above a given signal strength, to the network is mentioned and also see para [0053] wherein the mobile station sending the request for multicast service is mentioned);

Telefonaktiebolaget LM Ericsson does not teach specifically the method comprising transmitting a message from a base station in at least one selected cell of the group of cells, the message indicating, to user equipment positioned in the at least one selected cell, a list of cells that are neighbours to the at least one selected cell and are presently transmitting a multicast service.

However, Kim et al. teach a method comprising transmitting a message from a base station in at least one selected cell of the group of cells, the message indicating, to user equipment positioned in the at least one selected cell, a list of cells that are neighbours to the at least one selected cell and are presently transmitting a multicast service (see Fig.6 and page 4, para [0052] wherein UE positioned in serving/selected cell, collecting neighbor cells information from the serving/selected cell is mentioned and UE also receiving information from the serving/selected cell to determine MBMS condition of neighbor cells is mentioned).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson to include transmitting a message from a base station in at least one selected cell of the group of cells, the message indicating, to user equipment positioned in the at least one selected cell, a list of cells that are neighbours to the at least one selected cell that are presently transmitting a multicast service, disclosed by Kim et al. in order to provide an efficient service by supporting mobility of a UE receiving an MBMS service of a mobile communication system.

Telefonaktiebolaget LM Ericsson and Kim et al. together yet do not teach specifically the method comprising for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring

cell; for the at least one selected cell of the group of cells, accumulating a second count of the user messages received from user equipment in the cell and when the first count for a cell is not zero and the second count for the at least one selected cell is above a threshold number, initiating a point to multipoint multicast service in both cells.

However, Jung et al. teach a method wherein for each cell of the group of cells, accumulating a *first count* of the user messages having the cell included in the list of at least one neighbouring cell (see page 2, para [0026] and for the at least one selected cell of the group of cells, accumulating a *second count* of the user messages received from user equipment in the cell (see Fig.3 and page 2, para [0024] wherein any user/terminal sending message to network to receive multicast service is mentioned and this user can be in the at least one selected cell of the group of cells and also see para [0026], lines 8-11 wherein counting function is mentioned to accumulate the second count of all of these user messages in the at least one selected cell); and when the first count for a cell is not zero and the second count for the at least one selected cell is above a threshold number, initiating a point to multipoint multicast service in both cells (see page 2, para [0029], lines 8-12 wherein the network (i.e. RNC) performing a counting function of recognizing the number of UE terminals in cells and according to the result of counting process, network (i.e. RNC) transmitting the multicast service if the count is not zero, is mentioned and also see paragraphs [0028] and [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of

invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell, and for the at least one selected cell of the group of cells, accumulating a second count of the user messages received from user equipment in the cell and when the first count for a cell is not zero and the second count for the at least one selected cell is above a threshold number, initiating a point to multipoint multicast service in both cells, disclosed by Jung et al. to provide effective transmission of multicast service in a cell or specific group of cells in the mobile communication system and also to improve the performance of the system by efficiently using network resources for multicast service transmission in the system.

Regarding claim 22, Telefonaktiebolaget LM Ericsson teaches a method for determining whether to initiate a point to multipoint multicast service in a group of cells in a network (see Abstract and para [0049]), the method comprising: receiving at least one user message transmitted by a respective at least one user equipment positioned in a selected cell, wherein the at least one user message includes a list of at least one neighbouring cell and a request for multicast service (see Fig.1 and page 18, para [0051] wherein a mobile station 70 positioned in the group of cells in the network, reporting its active set i.e. the set of RBSs from which it receives signals above a given signal strength, to the network is mentioned and also see para [0053] wherein the mobile station sending the request for multicast service is mentioned);

Telefonaktiebolaget LM Ericsson does not teach specifically the method comprising transmitting a message from a base station in a selected cell, the selected cell either being one of the group of cells or a neighbour of at least one of the group of cells, the message indicating, to user equipment positioned in the selected cell, a list of cells that are neighbours to the selected cell and are presently transmitting a multicast service;

However, Kim et al. teach a method comprising transmitting a message from a base station in a selected cell, the selected cell either being one of the group of cells or a neighbour of at least one of the group of cells, the message indicating, to user equipment positioned in the selected cell, a list of cells that are neighbours to the selected cell and are presently transmitting a multicast service (see Fig.6 and page 4, para [0052] wherein UE positioned in serving/selected cell, collecting neighbor cells information from the serving/selected cell is mentioned and UE also receiving information from the serving/selected cell to determine MBMS condition of neighbor cells is mentioned).

Therefore, it would have been obvious to one of ordinary skills in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson to include transmitting a message from a base station in a selected cell, the selected cell either being one of the group of cells or a neighbour of at least one of the group of cells, the message indicating, to user equipment positioned in the selected cell, a list of cells that are neighbours to the selected cell that are presently transmitting a multicast service,

disclosed by Kim et al. in order to provide an efficient service by supporting mobility of a UE receiving an MBMS service of a mobile communication system.

Telefonaktiebolaget LM Ericsson and Kim et al. do not yet teach specifically the method comprising for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell; for each cell of the group of cells, initiating a point to multipoint multicast service in the cell if the first count is greater than the threshold number, and initiating or maintaining a point to multipoint multicast service in the selected cell when the first count is greater than the threshold number.

However, Jung et al. teach a method wherein for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of at least one neighbouring cell (see page 2, [0026]), for each cell of the group of cells, initiating a point to multipoint multicast service in the cell if the first count is greater than the threshold number (see page 2, para [0029], lines 8-12 wherein the network (i.e. RNC) performing a counting function of recognizing the number of UE terminals in cells and according to the result of counting process, network (i.e. RNC) transmitting the multicast service if the count is not zero, is mentioned and also see paragraphs [0028] and [0031]), and initiating or maintaining a point to multipoint multicast service in the selected cell when the first count is greater than the threshold number (see Fig.3 and page 2, para [0024] wherein any user/terminal sending message to network to receive

multicast service is mentioned and this user can be in the at least one selected cell of the group of cells and also see paragraphs [0028] and [0031]).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson and Kim et al. to include for each cell of the group of cells, accumulating a first count of the user messages having the cell included in the list of the at least one neighbouring cell, and for each cell of the group of cells, initiating a point to multipoint multicast service in the cell if the first count is greater than the threshold number, and initiating or maintaining a point to multipoint multicast service in the selected cell when the first count is greater than the threshold number, disclosed by Jung et al. to provide effective transmission of multicast service in a cell or selected cell in specific group of cells in the mobile communication system and also to improve the performance of the system by efficiently using network resources for multicast service transmission in the system.

8. Claim 7 is rejected under 35 U.S.C. 103(a) as being unpatentable over Telefonaktiebolaget LM Ericsson (Pub. No: WO-2004/016012 A1) in view of Kim et al. (US Pub.No: 2004/0202140 A1), further in view of Jung et al, (Pub. No: 2005/0213541) and further in view of 3GPP TS 25.346 V6.0.0 (2004-03) ("3GPP").

Regarding claim 7, Telefonaktiebolaget LM Ericsson, Kim et al. and Jung et al. all together yet do not teach specifically the method wherein the list of the at least one neighbouring cell indicates base stations having transmissions that user equipment is able to demodulate.

However, "3GPP" teaches the method wherein the list of the at least one neighbouring cell indicates base stations having transmissions that user equipment is able to demodulate (see page 21, section 7.1 and also see pages 23-24, sections 7.3.1 – 7.3).

Therefore, it would have been obvious to one of ordinary skill in the art at the time of invention to modify the method of Telefonaktiebolaget LM Ericsson, Kim et al. and Jung et al. to include the list of the at least one neighbouring cell that indicates base stations having transmissions that user equipment is able to demodulate, disclosed by 3GPP in order to have better reception of multicast service in the mobile communication system .

Response to Arguments

9. Applicant's arguments with respect to independent claims 1, 19, 22, 23 and 38 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

10. Any response to this office action should be faxed to (571) 273-8300 or mailed

To:

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Hand-delivered responses should be brought to

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to SRINIVASA R. REDDIVALAM whose telephone number is (571)270-3524. The examiner can normally be reached on Mon-Fri 9:30 AM - 6:30 PM.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Chirag Shah can be reached on 571-272-3144. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.

/Srinivasa R Reddivalam/
Examiner, Art Unit 2477

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02/19/2011

/Chirag G Shah/

Supervisory Patent Examiner, Art Unit 2477